

arthritides, though clinicians have been unable to justify this conviction by scientific data, but now we know that in the laboratory, meat aggravates symptoms in parathyroidectomized animals.

Fully to appreciate the importance of diet for those suffering from even a mild hypoparathyroidism we had best quote verbatim from the words of Collip:

"Much evidence has been brought forward to show that both diet, and the type of flora of the alimentary canal play a very important rôle in relation to the development of tetany in parathyroidectomized animals. Thus it has long been known that a meat diet precipitates the onset of symptoms and increases their severity, while a milk diet decreases the severity or prevents the development of symptoms. Dragstedt and Peacock (1923) obtained results which indicated to them that the symptoms of parathyroid tetany are primarily the result of the absorption of the products of bacterial decomposition of meat in the intestine due to the development of a special proteolytic flora as a result of a meat diet. Their experiments also indicate, as have those of others, that tetany is much less marked when animals are given a milk diet. They also found that lactose and dextrin seem to have a special action in delaying the onset of symptoms. This action they have ascribed to the establishment by these food stuffs, of an aciduric flora in the intestine which prevents the bacterial decomposition of proteins into toxic split products.

Luckhardt and Compère (1924) have pointed out that changes in the permeability of the mucosa of the gut may have an important bearing in relation to parathyroid tetany."

The time at our disposal does not permit of a further review of these thoughts of certain members of our school of orthopaedic surgeons, yet we should add that Collip's most interesting studies were first brought to our notice by our studies of fragilitas ossium. Professor Collip's investigations seemed to us to strengthen the suggestion of Macallum that changes in the permeability of the mucosa of the gut may form a portal of entry for the infecting organism in certain of the so-called chronic or rheumatoid arthritides, and accentuate our belief that about ninety per cent of these chronic arthritides owe their origin to changes in the intestine.

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SOCIAL ASPECTS OF MENTAL DEFICIENCY*

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FOR the purposes of this discussion society may be resolved into two classes, namely, those who get along, and those who do not. We are not primarily concerned with the former class, except to recognize that upon them falls the burden of taking care of the others.

Who then are those who do not get along? By that expression we mean those who do not or cannot lead ordinary, average, normal, independent lives, fitting comfortably and wholesomely into their social and economic niches, and who by reason of that fact must be regarded as non-social or a-social, in other words, an unassimilated or a foreign body in the communal organism which must be dealt with both for the

benefit of the individual himself and for the welfare of society.

This increasing class of the socially or economically incompetent includes all the well known types for whom from time immemorial, society has had to make provision, or against whom society has had to protect itself. There are the victims of poverty who become the charges of the state; there are those who habitually lead lives of vice; there are the mentally handicapped; there are the confirmed delinquents and criminals.

It may strike you as inconsistent, if not humorous, to assert that criminals belong to the class who do not get along, in view of records particularly across the border, where notoriously ninety-five or more murderers out of every one hundreds go unpunished, and where in the State

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of Texas a lady governor has made a habit of pardoning convicted murderers. The situation in the States has been such as to cause Chief Justice Taft of the United States Supreme Court to declare that the administration of criminal law in the United States is a disgrace to civilization. Moreover, within the last few years there has grown up on both sides of the line a vast underground army of law-breakers, who administer to the comforts of those who do not take kindly to paternalistic prohibitive legislation. This class of law-breakers certainly cannot be included with those who do not get along. On the contrary they thrive and flourish. We may, however, regard this as a transitory phenomenon called forth by an extreme and hitherto unenforceable type of legislation, and we may still maintain that with sane and wholesome laws and adequate law enforcement the life of the criminal would not be such a comfortable and successful one as it now is in some parts of the world.

The essential situation, however, with which we are at present confronted is that the socially and economically incompetent classes are not decreasing. In fact it must be said that the present day attitude of society in many ways favours the increase rather than the decrease of the undesirable and dependent elements. It is the humanitarian age. More and better care for the socially sub-standard groups is the boast of our civilization. Everything is done to save the lives of those who are mentally or physically or otherwise handicapped, and to keep them alive as long as possible, no matter how complete the handicap may be, or how useless the individual either to society or to himself. Following the urge of ultra-humanitarian motives we may possibly find in the fullness of time that the principal occupation of the socially competent, or so-called normal individuals, will be to take care of the abnormals. Without underestimating the significance and the indispensability of the humanitarian and philanthropic spirit, we must not, in our self-encouraged good nature, forget that social wastage is also a vital economic problem; and that we are bound to consider not only the comfort and well being, and the individual rights of every handicapped person, but we are at least equally required to think of the larger problem of social welfare and race improvement.

Having made these general remarks, let us now state two major facts which stand out with startling clearness. The *greatest single factor in social and economic inefficiency is mental defectiveness*. The declaration that all men are created free and equal has resulted in much clouding of popular scientific thinking. Free in the sense that they are not, or should not be, chattels or slaves, yes; equal in the sense of being presumed to have certain equal political rights and equal protection by laws, yes; but that is about as far as human freedom and equality go. We all know that no man is created free, and that no two men are created equal. For one thing every human being is chained down by an inexorable heredity, which he can in no possible way escape. If all men were created equal, social and industrial upheavals and revolutions would be impossible; communism could never be a matter for public discussion because it would universally exist without people knowing it.

These statements are simply putting in another way the fact that we started out with, namely that society is divided into those who do and those who do not get on; and are merely a commentary on the great truth, that in general the reason why one group does not get on is that the members of that group in their personal equipment, and particularly in their mental equipment, are unequal to those who do get on.

This, of course, is a matter of common knowledge, and need not be illustrated by the use of statistics. Let us merely refer to certain common associations with which all those interested in welfare work are familiar; conditions the co-existence of which is so common that it cannot be regarded as a coincidence. These related conditions are: illiteracy, poverty and squalor, vicious and criminal habits, the absence of all those benign influences which cluster in the idea of home, the homing tendency itself, the lack of any regular settled trade, and the formation of unwholesome and non-social living habits in early childhood.

Among those to whom it is necessary for society to extend a helping or a restraining hand, the conditions just enumerated are often found associated. It is a mistake to regard any one of these conditions as the cause of the others. Rather, they all rest upon the basal factor of mental inferiority.

The second major fact is that the *greatest single cause of mental defectiveness is heredity*. This is now so well understood that it is not necessary to bring compilations of facts and figures to prove the case. These two facts if they are good for anything ought to serve to point the way we must take, if the problems connected with mental deficiency are to be attacked rationally.

What are the most conspicuous problems of the mentally deficient? Naturally, first comes the economic problem. These unfortunates present in varying degree an inability to compete with those better endowed. They require sheltered employment, special conditions of labour, and above all, a tempered if not indulgent attitude on the part of employers. Even with these favourable conditions so difficult to obtain, the more seriously handicapped are economically useless so far as independent existence is concerned. Sooner or later they must be institutionalized. Under institutional regime many of them may still be productively employable, while a considerable residue are helpless and useless from all points of view.

There is a second problem, namely the danger of criminal acts. It is now, to state a commonplace fact, correct to say that the great majority of delinquents and criminals, particularly the habitual types, are mentally subnormal or abnormal. Seventy-seven per cent of the inmates of thirty-five penal institutions in New York State were recently found, as a result of a painstaking study, to be the victims of definite mental disabilities. Sixty-six per cent of all the inmates were found to be repeaters, and repeaters almost without exception must be classed as mentally handicapped.

Knowing these facts we are forced to conclude that the very circumstance that recidivism exists and bulks so large in our criminal procedure is a demonstration that we are not properly attacking the problem of crime. The career of many repeaters could readily be prophesied after the first conviction, if means were available to make an adequate study of their mental condition. The inevitable conclusion would be that many of those who have become criminal are mentally deficient or abnormal, and not only a dangerous element in society at the time the crime was committed, but remain a permanent menace and should be permanently segregated

from society. Under ideal conditions recidivism should almost disappear. The recidivist by his repeated criminal acts testifies that society and the state have not recognized him for what he is.

A third problem of the mentally defective is that of marriage and parenthood. For some curious reason these two matters have quite commonly been regarded as one single problem. The scientific approach, however, is to reduce a problem to simpler terms and deal with them separately. The obvious intention of all those who have interested themselves in this question has been to prevent the propagation of mentally unfit individuals, and the methods hitherto commonly advocated have been to forbid the marriage of the mentally unfit, or, if necessary, to segregate them. In the latter case segregation throughout the entire reproductive period is of course necessary.

It is superfluous to remark that the prevention of marriage does not prevent reproduction; moreover, it is precisely in the group where the danger is greatest, namely among those of the upper levels of mental deficiency, the so-called morons, that the difficulties in carrying out the regulation of marriage would be greatest, if not insurmountable. Casual observation does not necessarily reveal the actual mental condition of these persons, and it is common knowledge that they find no difficulty in getting married under the existing laws, and it is most unlikely that any workable method could be devised to pick out unfit persons of this class from the community at large.

Even those who at one time or another may have been in an institution, or who may have come into conflict with the law, who may even have been convicted of crimes and served terms of imprisonment, are again easily lost in the social body. Their records do not necessarily follow them and there would be little chance of preventing their marriage if they found a willing partner. An effective marriage prohibition not only would be unenforceable, but would offer no prospect of preventing reproduction of the mentally unfit.

There are also convinced segregationists who insist upon the permanent custody of feeble-minded individuals for the purpose of preventing reproduction. They particularly insist upon this sort of imprisonment for feeble-minded girls and women of child-bearing age, although the

unfairness of this kind of sex-discrimination is obvious.

Institutionalization of a permanent kind is self-evidently the only rational means of handling certain classes of defectives and abnormals. These classes are easily defined. Roughly they are those who are simply incapable of maintaining themselves satisfactorily in an independent existence, and those with dangerous or criminal tendencies which make them a menace to the public. There can be no reasonable argument about the necessity of placing such persons in safe keeping; but to order permanent custody of any individual for the main purpose of preventing propagation seems to me about as rational as to put the whole body in a plaster cast for the treatment of a broken finger.

Here, again, it would be necessary to lock up myriads of higher grade defectives, in other words, precisely those who are best able of all the subnormal types to carry on an independent life. In addition to the inherent unreasonableness of such a procedure the financial burden involved would be prohibitive.

There seems to be no very good reason why the questions of marriage and parenthood should not be considered as two separate matters, as they really are. In dealing with defectives the desired end is obviously to dam the stream, and to accomplish this there is only one method, namely by the operation of sterilization to make it impossible for the defective individual to reproduce his kind.

Once this end is attained the question of marriage might be left to take care of itself. In certain situations marriage between higher grade defectives might even be encouraged. The stabilizing influence of marriage is traditional, even if it is not always a fact, and it is easy to obtain family histories of the mating of defectives showing that it had been possible to maintain some sort of a home life affording mutual satisfaction until the offspring began to arrive; but with an increasing family the burden became too great, and parents and children became public charges.

But as soon as the question of sterilization is raised public opinion shows a number of spontaneous and always more or less stereotyped reactions, and various objections are promptly brought forward. Some of these objections are based on sentimental or so-called humanitarian

grounds against interfering with certain intimate personal rights. These objections are often based on a misunderstanding of the nature of the operation and of the fact that the only physiological function interfered with is that of begetting or conceiving as the case may be, all other aspects of the conjugal relationship being left untouched.

Objections based on quasi-religious grounds are sometimes heard. It is hardly necessary to discuss them.

Probably the chief obstacles to dispassionate consideration and rational action are the inertia of public opinion on the one hand, if we may so put it, and fear of public opinion on the other. Sterilization is something which has not been commonly done. To some people it at once suggests sinister motives. It seems in some vague way to subtract somewhat from the personal integrity of the individual. Moreover it is intimately bound up with the whole question of sex; and the hypocritical squeamishness of the public with regard to such matters is notorious.

And yet the procedure of sterilization is merely a surgical operation like other surgical operations; in the male, a minor one. Properly done it is not known to have ill effects, and no physiological effects not compatible with the end to be attained; and in the attainment of that end it is effective.

There are also those who speak from the scientific point of view, who assert that knowledge of the operations of heredity is incomplete, and that therefore the operation is unwarranted because perchance not every defective will necessarily always have defective children, and because not all cases of mental defect are hereditary in origin.

These contentions may be freely admitted, and yet it is a matter of experience that in general like mates with like, and that more often like begets like than the contrary. Along with ninety-nine potential defectives whose propagation is prevented by sterilization, possibly one potential genius will be lost to the world. Is that sufficient reason to authorize the reproduction of the ninety-nine defectives? The fact that feeble-mindedness is sometimes due to conditions associated with birth or early post-natal life is hardly relevant to the question. It should be obvious that intelligent preventive measures

would be directed primarily toward checking the transmission of defective inheritance.

There are also medical arguments and moral arguments. It is argued that under the protection of sterilization morals would relax, promiscuity be encouraged and the danger of the spread of venereal diseases be increased. These statements are made, however, without any basis in fact, do not rest on observations, and are merely the guesses of the objectors. On this point I shall make further comment.

On the whole the usual objections to sterilization which one hears seem to be on a par with many other cut and dried opinions which are handed on from generation to generation, uncritically accepted, vociferously defended and sometimes fought over; but which eventually are found to be unsound and are at length superseded.

The question of preventing by sterilization the reproduction of the mentally unfit has been discussed in this province (Ontario) from time to time, but has always been frowned down before it could make much headway. There is only one province in the Dominion of Canada in which a fair hearing on this question has so far been possible, namely British Columbia. In that province a Royal Commission in Mental Hygiene sat during the month of April of this year to consider present resources and future needs in the treatment and disposal of the mentally handicapped in the province. The subject of sterilization received a very full consideration and from all quarters interested the proposal met with approval. It will not be surprising if a sterilization law is passed by the forthcoming legislature in British Columbia, which will thus set the example to the other provinces of an enlightened approach to a serious problem. It should be mentioned that there are also active advocates of sterilization of the mentally unfit in the Province of Alberta and that efforts are on foot to secure enabling legislation.

It must be acknowledged that the fate of sterilization legislation in the United States has been somewhat disheartening. Such laws have been passed in twenty-four States but have been operative so far as I know in only two, Nebraska and California. In seven States the law, after having been passed, was declared unconstitutional. In New York State a steriliza-

tion act was passed in 1912, but no means were provided by which it could be carried out. It remained inactive until 1920 when it was repealed.

The situation in California makes up somewhat for the inertia and reactionary tendencies exhibited in the other States. In California sterilization was legalized in 1909, the Act has been twice amended, and in its present form dates from 1917. The first operation in California was performed at one of the State hospitals in 1910. Up to the end of 1925 about 5,000 cases had been operated upon; of these approximately 4,000 were insane patients and 1,000 mental defectives. Besides defectives and severe recurrent and chronic types of insanity, sterilization is carried out in certain cases of epilepsy, in psychoses associated with pregnancy and in various dementing types, who may be able to leave hospital while still in the child-bearing period. It is also made use of as a means of birth control in families where there are already as many or more children than can properly be cared for.

The people of California have taken very kindly to the idea and the operations are being performed in increasing numbers each year. Dr. F. O. Butler, Superintendent of the Sonoma State Home for Feeble Minded, reports that in no single instance has there been any ill effect of the operation of sterilization, but that on the contrary the mental and general health of a number of cases has appeared to be improved. Especially salutary have been the results in those distressing cases of psychoses associated with child-bearing in which recurring pregnancies are dreaded because of the probability of an accompanying mental attack. With the major cause of the recurrent psychosis thus eliminated these patients have remained well. In a number of instances sterilized patients who have been able to leave hospital have later contracted happy marriages.

The question whether sterilization might increase prostitution and venereal disease Dr. Butler answers as follows, "From observation at all the institutions, we are decidedly of the opinion that it does not," and he adds that among parole cases who have been sterilized it is rare that one returns with venereal disease, after intervals of months or even years.

In view of an experience such as that of

California, extending now over a period of fifteen years, it is to be hoped that interest in this very valuable means of checking racial deterioration may receive more enlightened at-

tention on the part of legislators and the public; and that similar measures may become available in our own country where the need is certainly no less.

AN EFFECTIVE MEDICAL TREATMENT FOR THE CURE OF CHRONIC GASTRIC AND DUODENAL ULCERS*

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AT a meeting of the Ontario Medical Association held in Toronto in June, 1901, following the discussion of Dr. Rudolf's paper on gastric ulcer I became convinced that the ultimate solution of the problem must be medical rather than surgical. Dr. McPhedran stated he regarded the treatment to be surgical. That was a shrewd forecast of what has taken place so generally since that day. Dr. Ochsner followed, saying: "I operate these cases occasionally, but I wish to warn the last speaker, that these patients after operation must be just as careful of their diet as if no operation had been performed." If this was true, it occurred to me that no matter how carefully the ulcer was excised, the cause of the ulcer still remained, possibly to bring about a recurrence, therefore the search for a medical solution should not be entirely futile.

In October, 1909, at a meeting of the Academy of Medicine, Toronto, Dr. Hoover of Cleveland gave an address on the subject, and on this occasion Dr. McPhedran recalled his stand of 1901, and reiterated his conviction that the treatment remained with the surgeons. To my surprise, I was asked to speak next, and in concluding my remarks expressed the opinion that the real solution of the difficulty must be a medical one, and if we were watchful and patient, some day we would get the revelation. Nearly sixteen years later in Toronto, I feel myself able to fulfil that prediction by describing a well-matured, practical and satisfactory treatment, which controls and cures chronic gastric ulcer and chronic duodenal ulcer.

A review of recent literature on the subject would lead one to conclude that, notwithstanding the considerable success which has marked the surgical treatment of these diseases, the increasingly severe operations proposed indicate an uneasy lack of finality. On the other hand, the most widely accepted medical treatment has been a highly specialized hospital procedure, which, owing to its severity and to the prolonged time required to apply it thoroughly, has left little to choose between the medical and surgical methods of cure.

In *The Lancet*, March 31, 1923, Sir Berkeley Moynihan said: "I think it is a reproach to medicine that the surgeon should be compelled to operate so frequently for gastric and duodenal disease. Such ulcers ought to be cured, far more frequently than they are, by medical treatment."

It seems to me possible to remove the reproach referred to by Sir Berkeley Moynihan. For over ten years I have used a regimen which has given me every satisfaction. The use of this regimen has saved my patients the heavy expenses of hospital charges, surgical fees, and the severe loss of earning power which goes with prolonged periods of sickness and convalescence. It certainly has saved me the responsibility of recommending high priced and painful treatments, which, in the best of hands, have given an embarrassing percentage of unsatisfactory results.

My observations have now been made on a sufficient number of cases, and over a sufficient period of time, to justify me in drawing conclusions, and in presenting these views to the profession. By describing the essential features of the treatment I do not hope to prove at once

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